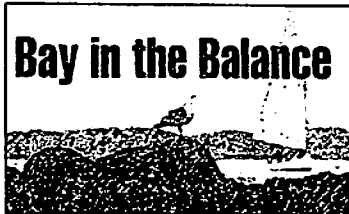


PART VI: The Real Dig – Duxbury Shellfishing

Bay in the Balance

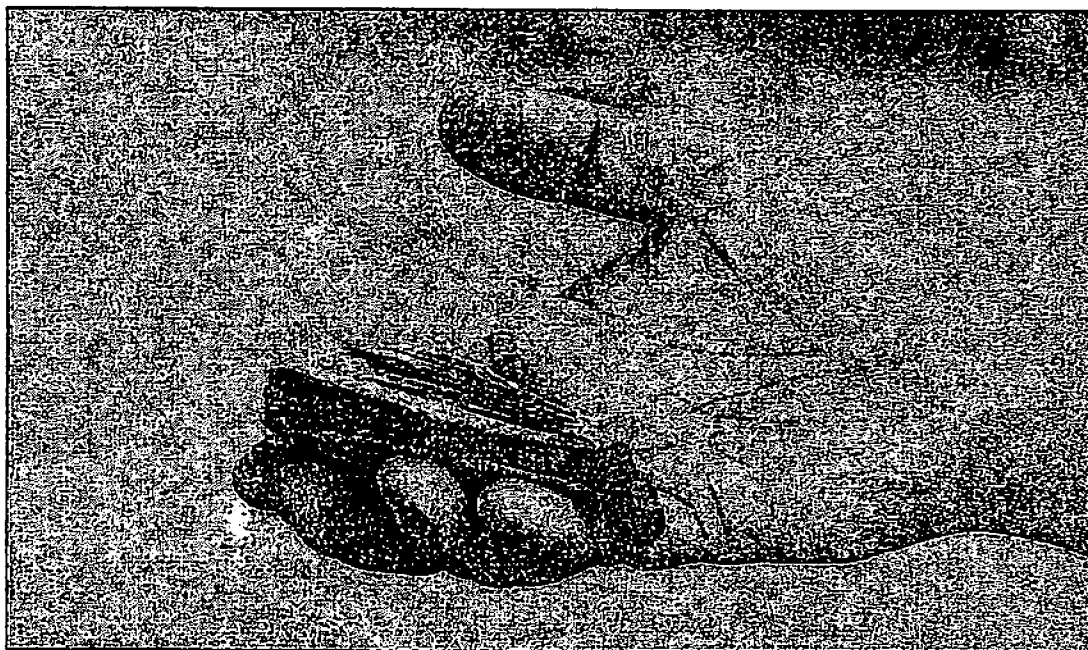


By DEBORA BABIN KATZ

The history of shellfishing in Duxbury is as rich as its supply. Mussels and clams helped to sustain the early colonists who relied on the natural resource as a main staple in their diets.

And long before the Pilgrims arrived, Native Americans harvested shellfish from the mud flats of these waters.

In the 1800's, a commercial use for the common soft shell clam as bait took hold, and Duxbury became one of the leading suppliers of bait to fishing ports in Boston, Gloucester and Provincetown.



Eel grass, mussels and pollution nearly wiped out Duxbury's soft-shell clams near the turn of the 20th century.

Photo by David Grossman

"The harvest from Duxbury, Kingston and Plymouth was estimated to be as high as 100,000 bushels of clams per year," said Frank Germano of the Massachusetts Division of Marine Fisheries. "If this could be done today, it would translate to more than \$9 million annually to the local economy."

In the 1860s, another market developed as steamers grew in popularity in New York and Chicago. Not surprisingly, soft shell clams in the flats of these three bays were soon close to extinction from over-harvesting. Most towns responded by racking and removing mussels, which threatened soft shell clams. Duxbury Selectmen, however, went further by instituting the first clam transplant program. It included taking clams from productive flats along the Jones River and

Kingston Bay and transplanting them to Duxbury's beds. By the late 1800s, certain intertidal flats were restricted for the use of propagation as part of an effort to reverse the clam's steady decline.

Moreover, Duxbury Selectmen established a "resident only" clam harvesting limitation. "They became one of the first towns in the state to limit shellfishing to residents only, Essex being the first," said Germano.

In 1920, to boost the local economy, Duxbury Selectmen initiated a relay program with the Commissioners of Inland Fisheries. It called for transplanting quahogs from New Bedford and Fall River into the Duxbury Bay; the 1869 clam relays had proven unproductive and too labor intensive.

Other efforts to restore the soft shell clam in Duxbury included Roosevelt's Works Progress Administration (WPA) that provided man-

power to establish "shellfish predator control," thus eliminating thousands of horseshoe crabs — a major enemy of the clam. Those efforts paid off. By 1936, clammers dug a record 77,950 bushels of soft-shell



Duxbury resident Jim Evans, clam rake in hand, prepares to dig.

Photo by David Grossman

clams, ten times more than the number in 1933.

Move Over Mussels

Duxbury's efforts to produce large quantities of soft shell clams fell short however, as eel grass encroachment and large beds of blue mussel began to cover the flats. The result was fewer clam beds throughout the Plymouth-Kingston-Duxbury Bay region. Harbor pollution in Plymouth Bay also contributed to the decline of the soft shell.

In 1950 at the request of Department of Marine Fisheries, Duxbury's Shellfish Constable, Manuel Oliver, tested two different experiments using plastic screen and chicken wire to help seed shellfish. In addition, renewed efforts were launched to remove thousands of mussels from the bay. It wasn't enough; mussels continued to be a problem for the propagation of soft shell clams.

"Duxbury, like many Cape

towns, attempted to restore their clam beds by eradicating the mussels," said Germano of Maine Fisheries. "Local fisherman raked the mussels into piles on the beach, pouring oil on them and burning them."

The problem could have solved itself had there been a market for mussels but, as Oliver explained in 1950, it was only in New York that there was even a limited demand. And so the battle to eradicate the mussel continued, as officials tried to destroy one species to protect another.

On the Cutting Edge

As the softshell clam continued to be sought after, a new commercial market has surfaced for razor clams. Until the early 1980s razor clams were sold primarily for bait. "It was an under utilized species until a domestic Asian market was found," said lobsterman Billy Bennett who spends his off-season razor clamming. Razor clams, he said, are shipped to chinatowns around the country and to parts of Canada.

Concerns over the possibility of over-harvesting the razor prompted the Shellfish Advisory Committee, a group of nine residents including ex-officio member Harbormaster Don Beers, to establish a special commercial license for the specie — the Limited Entry Razor Clam license. This license is limited to a total of 15 individuals per year and licenses are issued via a lottery system.

In 2001 razor clams wholesaled for 25 cents a clam. The last commercial report filed by the town of Duxbury to the Commonwealth (in 1997) estimated the commercial catch at 2,320 bushels. Recreational diggers took another 50 bushels.

The harvesting of razor clams differs from other shellfish species. Salt is sprinkled on the mud flats, which forces the clam to rise to the surface area. Without this process, it would be impossible to harvest the razor because it is so fast, said Beers.

The Big Dig

Today on Duxbury Bay, both residents and non-residents enjoy extended shellfishing seasons. The number of diggers has increased steadily over the years and now out-of-towners surpass the

number of Duxbury residents shellfishing the Bay. (In 2001, the Town Clerk's office sold 1,157 non-resident shellfishing permits; Duxbury residents bought 832 licenses)

"Duxbury is very fortunate," said Germano. "It has the most significant shellfishing in the area from Boston to the Canal."

In all, Duxbury has 18,618 acres of Duxbury water available for shellfishing. Those waters include Duxbury Bay, Blue Fish River, the Back River, parts of Kingston Bay and the ocean front side of Duxbury Beach. Seventy-eight acres are considered "Conditionally Approved" and include portions of the Blue Fish River and Eagles Nest. Only 796 acres are "Prohibited" and they lie mostly around Kingston Bay.

"We're hoping to be able to move up that area to 'Condi-



Shellfish Warden Tim Cipriani, is the right hand man to Harbormaster Don Beers.

tionally Approved' in the near future," said Germano who noted that the Town of Kingston's aggressive work toward a new sewerage treatment plant should bring back areas closed since the 1920s.

The season for soft shell runs in April, May, September and October with bonus seasons granted by selectmen at the rec-

ommendation of Shellfish Constable Don Beers, and the Shellfish Advisory Committee (S.A.C). This specific clam can be taken only on Wednesdays and Saturdays, and diggers are limited to six quarts a week per Family Consumption Permit in areas selected by the town. (A Family Permit allows for a total of 12 quarts per week for all shellfish, seaworms and eels including the six quarts of soft shell clams.)

The Shellfish Constable and S.A.C. will review a number of issues before making any recommendations on bonus seasons. Seasonal weather and the number of bushels harvested in a given month are part of the consideration", said Beers. "We want to make sure we don't destroy our natural resource; we're very careful about that."

Only Duxbury residents are permitted to shellfish commercially. A Combination Commercial Shellfish License costs \$75 annually and allows diggers to harvest eel, seaworm,

Clemmie Duxbury Clipper



Their bucket full, two diggers call it a day. Families are limited to 12 quarts a week. Photo by David Grossman

and bonus shellfish such as softshell. Limits, seasons, and shellfishing areas are set by the Board of Selectmen on the advice of Beers and the advisory committee.

"Commercial guys have to be 750 feet from mean low tide mainly to keep a separation between the commercial interests and recreational, and to spread out the resource," said Jim Pye,

chairman of the S.A.C.

Commercial licenses to harvest mussels and razor claims are also limited. The mussel, once raked and burned in huge numbers, is now a delicacy and a privilege to dig. Only 10 commercial mussel licenses are issued annually at a cost of \$130 per license. When an opening for a license to mussel becomes available, a publicized

lottery occurs to fill the opening. A waiting list is also maintained and presently 10 residents are on the wait list. The razor clam is limited to 15 commercial licenses annually at a cost of \$100 per license. As is the case for mussel licenses, a waiting list for razor clam licenses is maintained and new openings are filled via a public lottery. Today, there are 11 residents waiting to harvest this clam known for its new commercial use in the domestic Asian market.

With 32 miles of coastline and increased shellfishing activity, Shellfish Constable Don Beers, and Tim Cipriani, the shellfish warden, are kept busy with shellfish patrols.

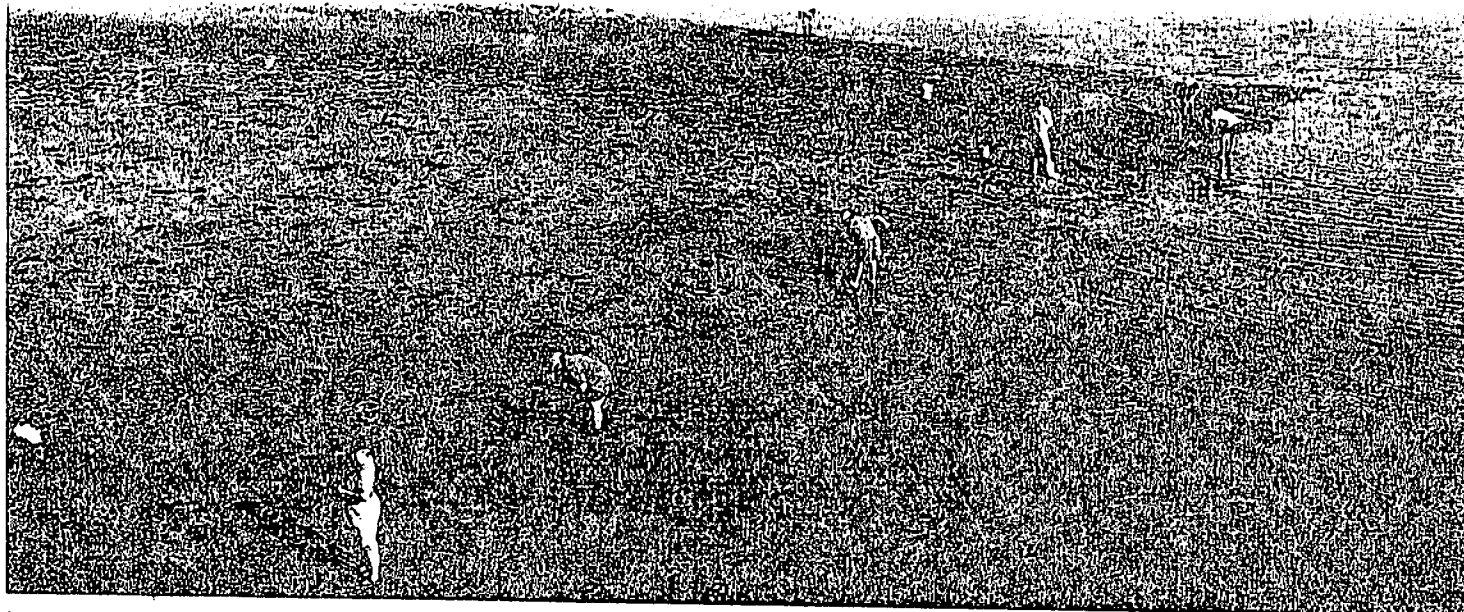
"Duxbury Bay, as far as shellfish, has probably never been in such wonderful shape and so we're able to open up these bonus seasons based on the condition of the resource," said Beers who noted that his office is out at every low tide checking shellfishers.

The patrols include confirming permits, ensuring that diggers take only their allowed quota, ensuring that they dig properly, behave responsibly, and, for safety reasons, that everyone is off the mud flats prior to sunset. "Violations are less than four percent, said Cipriani "so for every 100 people shellfishing, four people will have a violation."

Its increasing popularity often requires two to three patrollers to be on duty at any one time. One of the busiest weekends falls after Labor Day when patrollers can observe 500 diggers, said Cipriani.

Some of the hot spots for shellfishers are Shipyard Lane, Harden Hill and Howland's Landing.

The popularity of shellfishing, both recreational and commercial, has grown substantially in conjunction with the retail and wholesale values of this important natural resource. Duxbury's Big Dig continues to be enjoyed by many.



Duxbury clammers enjoyed a bonus season this year. Here diggers work a spot off Powder Point.

Photo by David Grossman



Clam diggers are hard at work around 1900. In the background Duxbury Beach.

Photo courtesy of DR&

An Historical Look at Duxbury's Shellfishing

	1997	1994	1991	1988	1981	1975	1963	1953
Total diggers(1)	u/a	13,433	11,487	8,806	u/a	u/a	u/a	u/a
Recreational Permits sold	1,400	1,350	1,223	1,093	1,012	2,500	1,275	1,032
Commercial permits sold	65	41	43	27	u/a	u/a	23	53
Revenues from permits	\$47,000	\$39,213	\$34,564	\$28,790	\$11,209	\$8,000	\$1,343	\$482
Approx. Recreational Bushels	14,650	3,846	3,446	2,699	1,958	475	u/a	458
Estimated Retail Value/ Rec	u/a	\$357,670	\$341,784	\$184,550	\$39,000	u/a	u/a	\$1,599
Approx. Commercial Bushels	6,886	33,991.5	18,007.5	730	21,379	6,000	1,416	2,119
Estimated Wholesale Value/Com	\$319,187	\$305,833	\$225,990	\$26,920	\$123,625	u/a	\$8,005	\$7,023

Note: In 2001, there were 1,969 citizen permits sold and total revenue from permits \$47,000. Last available shellfish catch report for town of Duxbury available from Mass. Marine Fisheries Division was 1997; all information was estimated.

(1) The number of fishermen encountered/inspected/logged by Shellfish Warden: u/a: Data Unavailable

Source: 1994 back to 1953: Compilations of Annual Town Reports and Shellfish Warden documentation.